

What is claimed is:

1. A tuning-fork type vibration gyro comprising:
  - a tuning-fork type vibration body having two arms mutually disposed in parallel and a base for commonly supporting one end of said each arm, wherein a longitudinal direction of said two arms is defined as a z-axis and a perpendicular direction thereto is defined as an x-axis;
  - driving electrodes respectively formed on said two arms for generating vibration of said two arms in a direction parallel to said x-axis;
  - detecting electrodes respectively formed on said two arms for detecting electromotive force generated when said tuning-fork type vibration body is rotated around said z-axis; and
  - 15 dummy electrodes formed on said two arms in respective areas different from said driving electrodes and said detecting electrodes.
2. A tuning-fork type vibration gyro comprising:
  - 20 a tuning-fork type vibration body having three or more arms mutually disposed in parallel and a base for commonly supporting one end of said each arm, wherein a longitudinal direction of said three or more arms is defined as a z-axis and a perpendicular direction thereto is defined as an x-axis;
  - driving electrodes formed on at least two arms of said three or more arms for generating vibration of said two

arms in a direction parallel to said x-axis;

detecting electrodes formed on at least one arm of  
said three or more arms for detecting electromotive force  
generated when said tuning-fork type vibration body is  
5 rotated around said z-axis; and

dummy electrodes formed on said three or more arms  
in respective areas different from said driving electrodes  
and said detecting electrodes.

10 3. The tuning-fork type vibration gyro according to  
claim 1 or claim 2 wherein said tuning-fork type vibration  
body is formed of ferroelectric body.

15 4. The tuning-fork type vibration gyro according to  
claim 1, wherein said dummy electrodes are formed on four  
side faces of said each arm, being connected so that each  
dummy electrode has an identical potential.

20 5. The tuning-fork type vibration gyro according to  
claim 2, wherein said dummy electrodes are formed on four  
side faces of said each arm, being connected so that each  
dummy electrode has an identical potential.

25 6. The tuning-fork type vibration gyro according to  
claim 1, wherein said dummy electrodes are electrically  
connected to said detecting electrodes.

7. The tuning-fork type vibration gyro according to claim 2, wherein said dummy electrodes are electrically connected to said detecting electrodes.

5       8. The tuning-fork type vibration gyro according to claim 1, wherein said driving electrodes and detecting electrodes are disposed in deviating positions in said z-axis direction.

10       9. The tuning-fork type vibration gyro according to claim 2, wherein said driving electrodes and detecting electrodes are disposed in deviating positions in said z-axis direction.

15       10. A tuning-fork type vibration gyro having a sensor circuit to which a sensor signal generated by a tuning-fork type vibration body is input, said sensor circuit comprising:

20       a differential amplifier to which said sensor signal is input; and

      a capacitor or a voltage limiting element being connected to input terminals of said differential amplifier.

25       11. The tuning-fork type vibration gyro according to claim 10 wherein said voltage limiting element is a Zener diode, and said Zener diode, said capacitor and said

differential amplifier are integrated into one piece.

12. A tuning-fork type vibration gyro having a sensor circuit to which a sensor signal generated by a tuning-fork type vibration body is input,

wherein said sensor circuit comprises:

a differential amplifier to which said sensor signal is input; and

an inductor being connected to input terminals of said differential amplifier.

13. The tuning-fork type vibration gyro according to claim 10, wherein said differential amplifier comprises:

a first stage transistor being differentially connected; and

a guard electrode for separating said first stage transistor from transistors in succeeding stages.

14. The tuning-fork type vibration gyro according to claim 12, wherein said differential amplifier comprises:

a first stage transistor being differentially connected; and

a guard electrode for separating said first stage transistor from transistors in succeeding stages.

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15. A tuning-fork type vibration gyro comprising:

a tuning-fork type vibration body having two arms

disposed in parallel and a base for commonly supporting one end of said each arm, wherein a longitudinal direction of said two arms is defined as a z-axis and a perpendicular direction thereto is defined as an x-axis; and

5        a sensor circuit to which a sensor signal generated by said tuning-fork type vibration body is input, wherein said tuning-fork type vibration body further comprises:

driving electrodes respectively formed on said two  
10 arms for generating vibration of said two arms in a direction parallel to said x-axis;

detecting electrodes respectively formed on said two arms for detecting electromotive force generated when said tuning-fork type vibration body rotates around said z-axis;

15 and

dummy electrodes formed on said two arms in respective areas different from said driving electrodes and said detecting electrodes,

and,

20 said sensor circuit comprises:

a differential amplifier to which said sensor signal is input; and

a capacitor or a voltage limiting element being connected to input terminals of said differential  
25 amplifier.

16. An electrode trimming method for a tuning-fork

type vibration gyro having two or more arms and a base for supporting said arms, driving electrodes and/or detecting electrodes respectively formed on said arms, and a support substrate for supporting said tuning-fork type vibration body on said base, said electrode trimming method comprising the steps of:

when defining a parallelly disposed direction of said arms as an x-axis, suppressing vibration of said support substrate while vibration of said arms in a direction parallel to said x-axis is excited by a predetermined drive power applied to said driving electrodes; and

adjusting areas of said detecting electrodes so that a sensor signal output from said detecting electrodes is decreased.

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17. The electrode trimming method for the tuning-fork type vibration gyro according to claim 16,

wherein said vibration of the support substrate is suppressed by a pressing jig formed of a rubbery elastic body.